What we claim is:

1. A stationary phase for liquid chromatography which comprises:

   (a) a rigid supporting material having a surface;

   (b) said rigid supporting material having ion bearing functional groups attached to said surface;

   (c) said rigid supporting material where ion bearing functional groups are shielded by a hydrophobic permeable stationary layer from direct contact with a mobile phase.

2. The stationary phase for liquid chromatography according to claim 1 in which said hydrophobic permeable layer is a continuous brush type structure made of long alkyl chains chemically attached to the said rigid supporting material.

3. The stationary phase for liquid chromatography according to claim 1 in which said ion bearing functional groups are for cation exchange chromatography and can be selected from one of a sulfate, phosphate or carboxylic acid chemically attached to the middle of said continuous brush type structure made of long alkyl chains.

4. The stationary phase for liquid chromatography as claimed in claim 1 in which said ion bearing functional groups are for anion exchange chromatography and can comprise a basic group chemically attached to the middle of a continuous brush type structure made of long alkyl chains.

5. The stationary phase for liquid chromatography according to claim 4 in which surface is a continuous brush type structure bearing an ion bearing functional group being a basic group chemically attached to the middle of said continuous brush type structure and is an amine.

6. The stationary phase for liquid chromatography according to claim 5 and the ion bearing functional group is tertiary amine chemically attached to said continuous brush type structure.

7. The stationary phase for liquid chromatography according to claim 5 and the ion bearing functional group is a secondary amine chemically attached to said continuous brush type structure.